

COUNTY BOROUGH OF WARRINGTON.

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# ANNUAL REPORT

TO THE

EDUCATION AUTHORITY

ON

# SCHOOL HYGIENE

FOR THE YEAR 1919,

BY

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Medical Officer of Health  
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TO THE EDUCATION AUTHORITY OF THE  
COUNTY BOROUGH OF WARRINGTON.

GENTLEMEN,

I beg to submit to you my Seventh Annual Report on School Hygiene, viz., that for the year 1919.

The total number of elementary school children on the Registers in Warrington was 14,129, and the average attendance at the end of the year was 12,489.

During the period under review there were examined at the Routine Medical Inspections 4,237 children (see page 11 *et seq.*).

In addition, 5,873 children were examined by the doctor at various special inspections either in the Schools or at the Clinic, making a total of 10,110 children medically examined, exclusive of any re-examinations.

The number of defects found were 4,590, and out of these 4,234, or 92.2%, received satisfactory treatment (see page 31).

No less than 32,249 attendances of 5,481 school children were made at the Clinic for the treatment of various minor ailments (see page 37, &c.).

## SECTION I.

## Sanitary Condition of the Public Elementary Schools in the Borough.

There are at present in Warrington 23 Public Elementary Schools, divided into 48 different Departments.

Visits of inspection have been paid as usual, and the various premises may be grouped as follows, into four main divisions:—

### I.—MODERN SCHOOLS.

These are all up-to-date modern public elementary Council Schools, of which Oakwood Avenue is the best and built on the “ Corridor ” principle, the other three being of the “ Central Hall ” type.

Name of School.	Depart- ment.	Accommo- dation.	
Oakwood Avenue Council .....	Boys'	420	
	Girls'	420	
	Infants'	420	
Beamont Council .....	Boys'	360	
	Girls'	360	
	Infants'	360	
Bolton Council .....	Boys'	420	
	Girls'	360	
	Infants'	360	
Evelyn Street Council .....	Boys'	420	
	Girls'	420	
	Infants'	420	

## II.—RECENT SCHOOLS OF OLDER TYPE.

These Church Schools, although of an older type, are fairly satisfactory from the sanitary aspect, although in some instances attention to the matters mentioned below would materially improve them.

Name of School.	Department.	Accommodation.	
St. Benedict's .....	Mixed	324	
	Infants'	318	
Fairfield .....	Girls'	511	
	Infants'	225	
Trinity .....	Mixed	228	Sanitary Conveniences—Pail Closets.
St. Mary's .....	Boys'	241	
	Girls'	278	
	Infants'	154	
Silver Street .....	Mixed	500	Sanitary Conveniences for Boys—Pail Closets.
	Infants'	171	Cloakrooms and lavatory accommodation inadequate. (Plans for alteration and additions have already been passed.)
Hamilton Street .....	Boys'	224	In the Infants' Department lighting could be improved by refixing the window frames 2ft. lower.
	Girls'	252	
	Infants'	155	
Arpley Street .....	Mixed	520	No. 1 Classroom is badly lighted owing to construction of building. A gallery in one room compels wrong position of desks.
	Infants'	125	
Parochial .....	Boys'	600	Playground unpaved, with rough surface.
	Infants'	387	
Heathside .....	Boys'	534	Heating by closed stoves.
	Infants'	218	„ „

## III.—SCHOOLS OF OLDER TYPE.

In every instance attention to certain conditions would materially improve these schools, although they are so built as to make structural alterations almost impossible.

Among the defects are such things as inadequate lighting and ventilation owing to construction of the building, insufficient and badly paved playgrounds, heating by closed stoves, sanitary conveniences of the pail closet type, no separate cloakroom or lavatory accommodation for the teaching staff.



Name of School.	Department.	Accommodation.	
Heathside .....	Girls'	375	Ventilation in Main Room and one Classroom deficient owing to surrounding buildings. Heating by closed stoves.
Latchford R.C. ....	Mixed	287	Girls' playground unpaved.
Latchford St. James'	Mixed Infants'	411 153	Sanitary Conveniences—Pail Closets. Boys' playground unpaved.
Sacred Heart .....	Mixed Infants'	172 158	Sanitary Conveniences—Pail Closets. Playground unpaved. Girls' Cloakroom badly lighted.
St. Alban's .....	Mixed Infants'	319 113	Heating by closed stoves. Insufficient Cloakroom accommodation for Mixed Department. Playground space very limited.
St. Ann's .....	Mixed Infants'	380 150	Insufficient lighting (girls') main room owing to adjacent buildings. Heating by closed stoves.
Thewlis Street .....	Infants'	235	Sanitary Conveniences—Pail Closets.
St. Peter's .....	Infants'	246	Heating by closed stoves.

IV.—OLD SCHOOLS that are badly constructed, defective from a sanitary point of view, and should be replaced as soon as possible.

Name of School.	Department.	Accommodation.	
Ladies' School of Industry .....	Girls'	173	Playground very small. Cloakroom and lavatory accommodation inadequate. School somewhat shut in by surrounding buildings.
St. Barnabas' School	Mixed Infants'	210 132	Sanitary Conveniences—Pail Closets. Cloakroom accommodation inadequate Playground very small (street used for the purpose). Closed stove in main room Infants' Department for heating.
Wycliffe School .....	Mixed Infants'	578 166	Ventilation deficient. Lighting of many of the rooms deficient. Sanitary Conveniences—Pail Closets. (These pail closets are situate in close proximity to school buildings.)

No structural alterations of note have been made for some years.

The majority of the schools require re-decorating, as it has been impossible to carry out much of this during the period of the War. It is hoped that many of the schools that are worst in this respect will be dealt with during the coming year. It is a great advantage to have the internal walls painted, as this not only gives a more durable surface, but enables it to be readily cleansed.

HEATING.—In 10 of the older schools the “closed stove” is still made use of for heating purposes. This is unsatisfactory; the air becomes dry and detrimental to both teachers and scholars. There is also the danger of poisonous products of combustion finding their way from the stove into the classroom air. With the wind in certain directions or when the top lid has to be opened to reduce the draught, a considerable portion of the fumes blow back into the room.

There is no doubt that if in these schools an outside boiler was installed, efficient heating by the low pressure system of hot-water pipes could be obtained, with a great saving annually in the amount of fuel consumed.

It is undesirable for boilers to be installed in the basements of schools, as frequently fumes from the coke fires ascend into the buildings.

GALLERIES.—There are galleries in three of the classrooms with fixed seating accommodation. These galleries are objectionable from several points of view. In each case they prevent the seating of the scholars in such position as to obtain full advantage of the lighting of the room. They take up a large amount of floor space, and both children and teachers are liable to accidents through slipping on the steps.

## SECTION II.

### Infectious Diseases Among School Children.

The measures taken to prevent the spread of infectious disease have been the same as in previous years and will not be detailed here.

The number of cases of notifiable infectious disease occurring among school children during 1919 are shown as follows :—

1.—NOTIFIABLE INFECTIOUS DISEASES.

Year.	Scarlet Fever.	Diph- theria.	Enteric Fever.	Pulmon- ary Tuber- culosis.	Other Tuber- cular Diseases	Measles.	German Measles.
	cases	cases	cases	cases	cases	cases	cases
1919	96	71	1	11	34	860	12

Except in the case of diphtheria and measles, these figures show a reduction from the previous year.

In the next table is shown the number of cases of non-notifiable infectious disease, though it must be remembered that this does not by any means represent the total number of such cases occurring in the town among the children, but only those that come to our knowledge.

2.—NON-NOTIFIABLE DISEASES.

Year.	Whooping cough	Chicken- pox	Mumps	Sore throat
	cases.	cases.	cases.	cases.
1919.	44	242	1225	417

During the early part of 1919 there was an epidemic of mumps, but the number of cases of the other diseases shows a considerable reduction compared with the year 1918.

**School Closure** was not resorted to as a preventive measure for any outbreak of infectious disease in 1919.

In order to minimise, as far as possible, the risk of conveying infection to school, certain children are referred



daily to the Medical Officer of Health. These cases consist of  
 convalescents from infectious disease;  
 contacts with infectious disease;  
 children who are suspected of infectious disease;  
 children suffering from sore throats;  
 and the numbers dealt with in 1919 are shown in the next  
 table:

CHILDREN EXAMINED BY MEDICAL OFFICER OF HEALTH AS TO  
 FREEDOM FROM INFECTION.

Disease.	Number of Examinations	Cases Detected.	
		1919.	
	1919.	Scarlet fever.	Diphtheria.
SCARLET FEVER (Convalescents examined as to their fitness to return to School.)	153	—	—
DIPHTHERIA Ditto.	71	—	—
CONTACTS with cases of Diph- theria examined previous to being allowed to attend School after case removed to Hospital.	152	—	—
SORE THROATS (examined previous to being allowed to attend School).	493	—	1
Totals	869	—	1

**Deaths from Infectious Diseases** and all other causes  
 among children of school age during the past five years are  
 given in the following table:—

Cause of death.	1915.	1916.	1917.	1918.	1919.
Scarlet Fever ... ..	15	—	—	2	—
Diphtheria ... ..	9	3	1	3	8
Enteric Fever ... ..	1	—	—	—	—
Measles ... ..	2	1	5	—	—
Whooping Cough ... ..	1	2	—	4	—
Diarrhoea ... ..	1	—	—	—	—
Tuberculosis of Lungs ... ..	7	13	9	4	7
Other Tubercular Diseases ... ..	10	—	6	5	6
Influenza ... ..	—	—	—	26	11
All other causes ... ..	39	39	37	46	26
Totals ... ..	85	58	58	90	58

## BACTERIOLOGICAL EXAMINATIONS.

Examinations made for the detection of Diphtheria:—

Year.	Number of Examinations made.		Positive Results.		Negative Results.	
1913	...	200	...	7	...	193
1914	...	197	...	5	...	192
1915	...	123	...	6	...	117
1916	...	195	...	6	...	189
1917	...	191	...	3	...	188
1918	...	110	...	1	...	109
1919	...	96	...	1	...	95

The following table shows the number of visits paid by the Sanitary Inspectors to the homes of school children in investigating and supervising outbreaks of infectious disease:—

To premises where cases of Scarlet Fever, Enteric Fever, or Diphtheria occurred ...	187
Re-visits to ascertain if contacts with Scarlet Fever, Enteric Fever and Diphtheria were free from infection and fit to return to School ... ..	231
Re-visits to cases of Scarlet Fever, Diphtheria or Enteric Fever being treated at home ...	88
Visits to premises where there were cases of Measles ... ..	1721
Re-visits to homes where cases of Measles are being treated ... ..	1805
Visits to homes of children reported by Educa- tion Department as being absent from School, owing to either Whooping Cough, Chickenpox, or Mumps ... ..	1511
Re-visits to homes of children suffering from either Whooping Cough, Chickenpox, or Mumps ... ..	1827
Visits to homes of children absent from School with Sore Throat or Suspicious Rash ...	851
Visits to homes where there were cases of Influenza or Pneumonia ... ..	1322
Visits to homes of children suffering from Pulmonary & Non-Pulmonary Tuberculosis	820
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Total ... ..	10363
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### SECTION III.

#### **The Routine Medical Inspection of School Children and the Work Carried Out at the Inspection and Treatment Clinics, together with the Supervision of the Home Life of the Children.**

##### A.—ROUTINE MEDICAL INSPECTION.

Altogether 4,237 children (2,046 boys and 2,191 girls) were medically examined at the regular inspections held in the schools, compared with 3,267 children (1,635 boys and 1,632 girls) similarly dealt with the previous year.

The main increase is due to the larger number of children examined in the entrant group, viz., 1,705 in 1919, compared with 627 in 1918. The influenza epidemic in 1918 interfered considerably with the attendances of the children in that year.

In addition, 142 children attending the Secondary School were also examined (page 24).

Out of the 4,237 children, 1,181 were referred for treatment of some defect (other than dental defects and uncleanness), and of these children more than 90% obtained satisfactory treatment.

Further particulars of the children examined are given in Table I., page 12; of the defects found in Table II., page 13, and Table II.a, between pages 14 and 15; of the numbers referred for treatment in Table IV., page 30; and of the actual number that received satisfactory treatment in Table V., page 31.

Many children are re-examined on several occasions and no mention is made in these tables of the re-examinations, of the examination of mentally and physically defective children (pages 25 and 26), of the examination of children for special schools, for scholarships, &c. (pages 36 and 37), or of the examination of children at the Secondary School (page 24).



TABLE I. Number of children inspected 1st January, 1919,  
to 31st December, 1919.

## A.—“ CODE ” GROUPS.

Age.	ENTRANTS.					Total.
	3	4	5	6	Other Ages.	
Boys .....			861			861
Girls .....			844			844
Totals ....			1705			1705

Age.	Inter- mediate Group.	LEAVERS.					Grand Total.
	8	12	13	14	Other Ages.	Total.	
Boys .....	627		558			1185	2046
Girls .....	666		681			1347	2191
Totals ....	1293		1239			2532	4237

## B.—GROUPS OTHER THAN “ CODE.”

(1)	Intermediate Group (other than 8 years) (2)	Special Cases * (3)	Re-Examinations (i.e. No. of Children Re-examined) (4)
Boys .....		} 5873	{ 2144
Girls .....			
Totals ....		5873	2144

GRAND TOTAL: 12,254 in 1919.

,, ,, 11,222 in 1918.

\* Under this head are included all special cases which were medically inspected during the year, whether the inspection took place in the Schools (see pages 22 and 23), or at the Inspection Clinic (see page 34), and from whatever source the cases were derived.



TABLE II.

Return of Defects found in the course of Medical Inspection  
in 1919.

DEFECT OR DISEASE.	Code Groups.		Specials.	
	Number re-ferred for treatment.	Number re-quiring to be kept under observation but not referred for treatment.	Number re-ferred for treatment.	Number re-quiring to be kept under observation but not referred for treatment.
1.	2.	3.	4.	5.
Malnutrition ... ..	34	—	1	2
Uncleanliness of: Head...	321	—	587	—
Uncleanliness of: Body ...	39	—	23	—
Skin—				
Ringworm: Head ... ..	7	—	119	—
Ringworm: Body ... ..	11	—	151	—
Scabies ... ..	18	—	211	—
Impetigo ... ..	74	—	1313	—
Other Diseases ... ..	23	—	10	—
Eye—				
Defective Vision & Squint ...	207	28	206	8
External Eye Disease ...	88	—	809	1
Ear—				
Defective Hearing ... ..	2	—	1	7
Ear Disease ... ..	48	—	203	—
Teeth—				
Dental Disease. (See N.B. (2) below). ... ..	242	—	—	—
Nose and Throat—				
Enlarged Tonsils ... ..	152	16	33	1
Adenoids ... ..	129	45	53	3
Enlarged Tonsils and Adenoids ... ..	13	8	11	—
Defective Speech ... ..	—	5	—	8
Heart & Circulation—				
Heart Disease Organic ...	5	—	—	—
Heart Disease Functional...	5	—	—	—
Anæmia ... ..	2	—	—	—
Lungs—				
Pulmonary Tuberculosis:				
Definite ... ..	3	—	1	—
Suspected ... ..	1	—	—	2
Chronic Bronchitis ... ..	19	—	—	—
Other Diseases ... ..	—	—	—	1
Nervous System—				
Epilepsy ... ..	—	—	—	1
Chorea ... ..	2	1	1	—
Other Diseases ... ..	4	—	—	3
Non-Pulmonary Tuberculosis—				
Glands ... ..	7	7	—	—
Bones and Joints ... ..	—	—	—	—
Other Forms ... ..	—	—	1	—
Rickets ... ..	7	—	—	2
Deformities ... ..	4	5	—	5
Other Defects or Diseases ...	61	132	845	8
Totals .....	1541	247	4579	52

Fuller particulars as to the sex and age of the children affected will be found in the Summary (Table IIa) (between pages 14 and 15).

ATTENDANCES AT ROUTINE INSPECTION.—Out of 5,057 children notified, 83% attended the inspection compared with 86% in 1918 of 3,798 notified.

NUMBER OF CASES IN WHICH PARENTS WERE PRESENT.—Parents attended with the children in 21.6% of instances, compared with 17.3% the previous year.

AVERAGE HEIGHT AND WEIGHT.—A special table is given (page 15) contrasting these averages for the different age-groups over a period of eleven years, and it is noteworthy that the average weight of the boys and the girls in all three age-groups for 1919 is higher in every instance than the average for the whole period under survey.

NUTRITION AND MALNUTRITION.—There is also a general improvement in the nutrition of the school child to be noted. The figures for 1919 contrasted with past years are as follows:—

		Above Normal.		Normal.		Below Normal.		Markedly Defective.
1919	...	8.09	...	87.89	...	3.2	...	.8
1918	...	8.17	...	86.87	...	3.46	...	1.5
1917	...	10.34	...	82.8	...	4.9	...	1.95
1916	...	8.3	...	81.5	...	8.2	...	1.8
1915	...	7.6	...	83.7	...	8.6	...	.2
1914	...	9.7	...	87.9	...	2.2	...	.02
1913	...	8.3	...	86.7	...	4.7	...	—
1912	...	15.2	...	83	...	1.5	...	.18

Again the largest proportion of badly nourished children are found in the leaver group, 7.8%, compared with 3.2% in the intermediate and 2.5% in the entrant group.

It will be interesting to note the effect, if any, of the new byelaws dealing with the Employment of Children and Street Trading on the nutrition of the child.



TABLE IIA.

RETURN SHOWING THE PHYSICAL CONDITION OF CHILDREN INSPECTED.

CONDITION.	Entrants.			Intermediate.			Leavers.			Totals.		
	Boys	Girls	Total	Per cent.	Boys	Girls	Total	Per cent.	Boys	Girls	Total	Per cent.
Number of children notified..	1035	1035	2070		704	781	1485		786	716	1502	2525
Number of children inspected	861	844	1705		627	666	1293		681	558	1239	2169
No. of cases in which Parents were present ...	285	318	603	34.78	89	141	230	17.78	21	65	86	395
No. of cases in which Parents were notified by letter ...	95	87	182	10.61	55	89	144	11.13	78	82	160	228
Clothing—												
Satisfactory ...	851	839	1690	99.11	627	663	1290	99.76	675	556	1231	2153
Unsatisfactory ...	10	5	15	.87		3	3	.23	6	2	8	16
Boots—												
Satisfactory ...	860	842	1702	99.82	624	666	1290	99.76	657	555	1212	2141
Unsatisfactory ...	1	2	3	.17	3		3	.23	24	3	27	28
Nutrition—												
Excellent ...	59	44	103	6.04	26	36	62	4.79	89	89	178	174
Normal ...	777	780	1557	91.31	580	616	1196	92.49	540	431	971	1897
Below Normal ...	17	15	32	1.88	19	14	33	2.55	42	29	71	78
Bad ...	8	5	13	.76	2		2	.15	10	9	19	20
Cleanliness of Head—												
Clean ...	848	717	1565	91.78	625	511	1136	87.78	672	371	1043	2145
Nits only ...	3	55	58	3.4	1	41	42	3.24	7	65	72	11
Pediculi ...	10	72	82	4.8	1	114	115	8.89	2	122	124	13
Cleanliness of Body—												
Clean ...	851	837	1688	99.00	621	660	1281	99.07	674	555	1229	2146
Dirty ...	8	6	14	.82	3	3	6	.46	4	1	5	15
Pediculi present ...	2	1	3	.17	3	3	6	.46	3	2	5	8
Skin—												
No Disease ...	821	826	1647	96.59	606	648	1254	96.98	645	545	1190	2072
Ringworm: Body ...	6		6	.35	3	1	4	.30	4		4	13
Ringworm: Head ...	1		1	.05	1	2	3	.23	2	1	3	4
Impetigo ...	20	13	33	1.93	10	12	22	1.70	12	7	19	42
Scabies ...	3	1	4	.23	3	1	4	.3	7	3	10	13
Other Diseases ...	10	4	14	.82	4	2	6	.46	11	2	13	25
Teeth—												
Sound ...	686	678	1364	80.0	406	434	840	64.90	505	369	874	1597
Less than four decayed...	98	104	202	11.84	184	191	375	29.00	162	178	340	444
Four or more decayed ...	77	62	139	8.15	37	41	78	6.03	14	11	25	128
Nose and Throat—												
No Defect ...	586	587	1173	68.79	493	496	989	76.48	495	397	892	1574
Mouth Breathers ...	16	12	28	1.64	1	9	10	.77	1	17	18	17
Tonsils slightly enlarged	64	75	139	8.15	46	62	108	8.35	87	80	167	197
Tonsils much enlarged	51	62	113	6.62	23	36	59	4.56	28	47	75	102
Adenoids: Slight ...	42	32	74	4.34	33	43	76	5.88	44	18	62	119
Adenoids: Marked ...	102	76	178	10.43	31	20	51	3.94	27	16	43	160
Diseases of the Eye—												
No Disease ...	848	826	1674	98.19	614	651	1265	97.82	668	542	1210	2130
Conjunctivitis ...	1	1	2	.11	1	1	2	.15	1	2	3	3
Blepharitis ...	10	15	25	1.46	7	11	18	1.39	7	12	19	24
Opacities of Cornea ...	2	1	3	.17	4	2	6	.46	3	2	5	9
Other Diseases ...		1	1	.05	1	1	2	.15	2		2	3
Diseases of Ear—												
No Disease ...	833	812	1645	96.48	606	652	1258	97.29	650	540	1190	2089
Obstruction R. ...	9	9	18	1.05	6	1	7	.54	12	1	13	27
Obstruction L. ...	14	15	29	1.70	9	8	17	1.31	8	2	10	31
Otorrhea R. ...	1	2	3	.17	3	2	5	.38	5	6	11	9
Otorrhea L. ...	4	4	8	.46	3	3	6	.46	6	9	15	13
Other Disease ...		2	2	.11								2
Speech—												
Not Defective ...	857	844	1701	99.6	627	666	1293	100.0	680	558	1238	2164
Defective Articulation ...	4		4	.23					1	1	1	4
Stammering ...												1
Heart and Circulation—												
No Disease ...	861	843	1704	99.94	626	663	1289	99.59	679	552	1231	2166
Organic Disease ...					1	2	2	.15	1	2	3	1
Functional Disease ...						1	2	.15	1	2	3	2
Anæmia ...										2	2	.16
Other Defect ...		1	1	.05						1	1	1
Lungs—												
No Disease ...	855	840	1695	99.41	623	662	1285	99.38	678	555	1233	2156
Chronic Bronchitis and Bronchial Catarrh ...	6	4	10	.58	3	3	6	.46	1	2	3	6
Tuberculosis ...					1	1	2	.15		1	1	.08
Tuberculosis suspected...									1		1	.08
Other Disease ...									1		1	.08
Tuberculosis, Non-Pulmonary—												
No Disease ...	858	841	1699	99.64	625	660	1285	99.38	678	552	1230	2161
Bones and Joints ...	1	1	2	.05					1			1
Glandular ...	2	2	4	.23	2	6	8	.61	3	6	9	7
Other Forms ...		1	1	.05								1
Diseases of Nervous System—												
No Disease ...	858	842	1700	99.70	627	666	1293	100.0	680	557	1237	2165
Chorea ...	1	1	2	.11					1	1	1	1
Other Diseases ...	2	1	3	.17					1		1	.08
Rickets—												
No Disease ...	857	839	1696	99.47	626	666	1292	99.92	680	558	1238	2163
Slight ...	1	1	2	.11	1	2	2	.07	1	1	1	3
Marked ...	3	4	7	.41		23	48	3.71	40	29	69	99
Deformities—												
No Deformity ...	856	843	1699	99.64	627	664	1291	99.84	680	558	1238	2163
Deformity Present ...	5	1	6	.35		2	2	.15	1	1	1	6
Other Diseases or Defects	34	42	76	4.45	25	23	48	3.71	40	29	69	99
Mental Condition—												
Bright ...	460	467	927	54.36	330	383	713	55.14	260	247	507	1050
Fair ...	325	323	648	38.00	211	190	401	31.01	287	208	495	823
Dull ...	73	54	127	7.44	85	93	178	13.76	132	103	235	290
Backward ...	1	1	2	.05					1			1
Mentally Deficient ...	2		2	.11	1	1	1	.07	2	2	2	.16







VISION (continuation of Table IIa.)

VISION.		Entrants, 1705.			Intermediate, 1293.			Leavers, 1,239.			Total, 4,237.			Special Cases.		
		Boys	Girls	Total	Per cent.	Boys	Girls	Total	Per cent.	Boys	Girls	Total	Per cent.	Boys	Girls	Total
R.	L.															
6/6	6/6	251	197	448	34.64	351	237	588	46.65	602	434	1036	41.31	10	10	20
6/6	6/9	40	26	66	5.1	60	49	109	8.79	100	75	175	6.91			
6/6	6/12		2	2	.15	2	2	2	.16	2	4	4	.15	2	2	4
6/6	6/18		3	3	.23	1	1	3	.24	2	3	5	.23	1	1	2
6/6	6/24	1	1	2	.15	1	2	1	.08	1	1	2	.03			
6/6	6/36		1	1	.07	2	2	2	.16	2	2	4	.07			
6/6	6/60		1	1		34	29	63	5.08	57	55	102	4.06	1	1	2
6/6	nil	23	26	49	3.78	137	132	269	21.63	322	381	703	27.72	6	11	17
6/9	6/9	184	249	434	33.56	9	7	16	1.28	20	24	48	1.89	1	1	2
6/9	6/12	11	17	28	2.16	7	7	14	1.12	15	17	32	1.26	2	3	5
6/9	6/18	8	10	18	1.39	2	6	8	.64	2	12	14	.55	2	1	3
6/9	6/24	1	2	3	.23	1	2	3	.24	2	4	6	.23	1	1	2
6/9	6/36		1	1	.07	1	1	2	.16	1	2	3	.11			
6/9	6/60		1	1		1	1	2	.08	4	1	5	.19	1	1	2
6/9	nil	6		3	.23	1	1	2	.16	12	16	28	1.10	4	4	8
6/12	6/6	7	11	18	1.39	5	5	10	.8	21	33	54	2.13	1	1	2
6/12	6/9	13	19	32	2.47	8	14	22	1.77	6	8	14	.55	1	2	3
6/12	6/18	4	5	9	.69	2	3	5	.4	3	5	8	.19	1	1	2
6/12	6/24	1	1	2	.15	2	1	3	.24	2	2	4	.11			
6/12	6/36	2	2	4	.15	1	1	2	.08	2	1	3	.03	1	1	2
6/12	6/60	1	1	2	.07	1	1	2		1	1	2				
6/12	nil	1	3	4	.3	3	1	4	.32	4	4	8	.31			
6/18	6/6	3	11	14	1.08	6	4	10	.56	9	12	21	.82	1	1	2
6/18	6/9	4	4	8	.61	4	3	7	.56	8	7	15	.59	3	1	4
6/18	6/12	24	31	55	4.25	16	19	35	2.82	40	50	90	3.55	15	18	33
6/18	6/18	2	1	3	.23	1	1	2	.16	3	2	5	.19	3	3	6
6/18	6/24	2	2	4	.15	1	1	2	.16	3	1	4	.15	1	1	2
6/18	6/36	2	1	3	.07	2	1	3	.16	2	1	3	.03	1	1	2
6/18	6/60		1	1				2	.16	2	1	3	.03			
6/24	6/6	2	1	3	.23	1	1	2	.08	2	2	4	.15	1	1	2
6/24	6/9	3	3	6	.23	1	1	2	.16	4	4	8	.35	1	1	2
6/24	6/12	2	5	7	.54	1	1	2	.16	3	6	9	.59	2	6	8
6/24	6/18	3	9	12	.92	2	1	3	.24	5	10	15	.03	2	6	8
6/24	6/24	1	1	2	.07	1	1	2	.08	1	1	2	.03	1	1	2
6/24	6/36	1	1	2	.07	1	1	2		1	1	2				
6/24	6/60		2	2				2		2	2	4				
6/24	nil	1	2	3	.15	1	2	3	.16	1	2	3	.03	1	1	2
6/36	6/6	1	2	3	.07	1	2	3	.08	1	2	3	.03	1	1	2
6/36	6/9	1	2	3	.15	1	2	3	.16	1	2	3	.03	1	1	2
6/36	6/12		1	1	.07		1	1	.08	1	1	2	.03	1	1	2
6/36	6/18	4	3	7	.23	5	7	12	.46	9	9	18	.71	6	3	9
6/36	6/24		2	2	.07		2	2			2	2				
6/36	6/36		1	1			1	1		1	1	2		1	1	2
6/36	6/60		1	1			1	1		1	1	2		1	1	2
6/60	6/6		1	1	.07		1	1	.08	1	1	2	.07	1	1	2
6/60	6/9		1	1	.15		1	1	.08	1	1	2	.03	1	1	2
6/60	6/12		1	1	.07		1	1	.08	1	1	2	.03	1	1	2
6/60	6/18		1	1	.07		1	1	.08	1	1	2	.03	1	1	2
6/60	6/24		1	1	.07		1	1	.08	1	1	2	.03	1	1	2
6/60	6/36		1	1	.07		1	1	.08	1	1	2	.03	1	1	2
6/60	6/60		1	1	.07		1	1	.08	1	1	2	.03	1	1	2
6/120	6/120		1	1	.07		1	1	.08	1	1	2	.03	1	1	2
nil	6/9		1	1	.15		1	1	.08	1	1	2	.03	1	1	2
nil	6/12		1	1	.07		1	1	.08	1	1	2	.03	1	1	2
nil	6/18		1	1	.07		1	1	.08	1	1	2	.03	1	1	2
nil	6/36		1	1	.07		1	1	.08	1	1	2	.03	1	1	2
nil	6/60		1	1	.07		1	1	.08	1	1	2	.03	1	1	2
nil	nil		1	1	.07		1	1	.08	1	1	2	.03	1	1	2
Illiterate	...															
Spectacles broken	...															
Spectacles unsuitable	...															
Spectacles lost	...															
Congenital Cataract	...															
Squint	...															
Corneal Opacity	...															
Eccentric Pupil	...															
Photophobia	...															
Nystagmus	...															
The following are included in the above return.		26	19	45		627	666	1293		681	558	1239		1334	1243	2577
Squint	...															
Corneal Opacity	...															
Echymosis, right eye	...															

The following are included in the above return.  
Squint  
Corneal Opacity  
Echymosis, right eye



AVERAGE HEIGHT AND WEIGHT OF CHILDREN EXAMINED DURING PAST TEN YEARS.

BOYS. GIRLS.

Year.	1st Age Period. (5 year olds).			2nd Age Period. (8 year olds).			4th Age Period (13 year olds).			1st Age Period. (5 year olds).			2nd Age Period. (8 year olds).			4th Age Period. (13 year olds).		
	Av. Ht.	Av. Wt.	Ft. Ins.	Av. Ht.	Av. Wt.	Ft. Ins.	Av. Ht.	Av. Wt.	Ft. Ins.	Av. Ht.	Av. Wt.	Ft. Ins.	Av. Ht.	Av. Wt.	Ft. Ins.	Av. Ht.	Av. Wt.	Ft. Ins.
1910	3 3.4	2 9 5.4	3 6.8	3 4 1	3 0 7.4	3 9.1	4 5.6	4 11 3.2	3 2.5	2 7 11.4	3 8.7	3 6.5	3 3 3.5	2 13 6.3	4 6.5	4 12 11.3	4 13 6.6	4 12 11.3
1911	3 4	2 7 6.6	3 9.5	3 4 12	3 4 8	3 9.5	4 5.8	4 12 5	3 3.5	2 8 4.5	3 9.2	3 8.7	3 3 3.5	2 13 6.3	4 5.9	4 13 6.6	5 3 4	5 3 4
1912	3 4.1	2 9 4.7	3 9.5	3 5 12	3 4 8	3 9.5	4 5.7	4 12 5	3 3.9	2 7 8.5	3 9.2	3 9.2	3 3 3.5	2 13 6.3	4 8.8	5 3 4	5 3 4	5 3 4
1913	3 4.3	2 9 6	3 9.4	3 5 12	3 4 8	3 9.4	4 6	4 13 8	3 3.8	2 8 3	3 9.1	3 9.1	3 3 3.5	2 13 6.3	4 6.8	5 3 4	5 3 4	5 3 4
1914	3 4.1	2 9 2	3 9.4	3 5 12	3 4 8	3 9.4	4 5.9	4 12 15.8	3 4	2 8 9.6	3 9.3	3 9.3	3 3 3.5	2 13 6.3	4 7.8	4 13 13	4 13 13	4 13 13
1915	3 4.3	2 9 5	3 9.7	3 5 0	3 5 0	3 9.7	4 5.4	4 12 0	3 4.1	2 9 12	3 9.1	3 9.1	3 3 3.5	2 13 6.3	4 5.9	4 12 11.6	4 12 11.6	4 12 11.6
1916	3 4.2	2 10 4	3 9.2	3 5 6.5	3 5 6.5	3 9.2	4 5.8	4 12 10.6	3 3.7	2 8 2	3 8.7	3 8.7	3 3 3.5	2 13 6.3	4 6	4 12 12	4 12 12	4 12 12
1917	3 3.9	2 8 4	3 9.8	3 4 14	3 4 14	3 9.8	4 5.9	4 12 14	3 4.2	2 8 9	3 8.7	3 8.7	3 3 3.5	2 13 6.3	4 6.9	4 13 1	4 13 1	4 13 1
1918	3 3.9	2 9 7	3 9.8	3 5 3	3 5 3	3 9.8	4 6.7	4 13 3.2	3 7.1	2 8 12.5	3 8.7	3 8.7	3 3 3.5	2 13 6.3	4 6.2	4 13 7	4 13 7	4 13 7
1919	3 3.7	2 11 1.5	3 9.1	3 4 8	3 4 8	3 9.1	4 6.7	4 13 3.2	3 7.1	2 8 12.5	3 8.7	3 8.7	3 3 3.5	2 13 6.3	4 6.1	4 13 14	4 13 14	4 13 14
Av'ge	3 3.9	2 9 4	3 9.07	3 4 6.6	3 4 6.6	3 9.07	4 5.8	4 12 8	3 4.08	2 8 7	3 8.3	3 8.3	3 3 0.3	2 13 6.3	4 6.6	4 13 11.7	4 13 11.7	4 13 11.7



CLEANLINESS, CLOTHING AND FOOTGEAR.—Out of the total children examined at the Routine Inspections, 11.2% were found to have verminous heads (*i.e.*, nits or pediculi or both).

Compared with previous years, the proportion is shown as follows:—

39.7	per cent.	in	1911.
27.9	„ „	„	1912.
11.9	„ „	„	1913.
10.8	„ „	„	1914.
7.3	„ „	„	1915.
10	„ „	„	1916.
10.73	„ „	„	1917.
15.8	„ „	„	1918.
11.2	„ „	„	1919.

The proportion varies greatly in the different age-periods:

8.1% among entrants (5 years),  
12% among the intermediate group (8 years),  
15.8% among the leavers (13 years),

and is heavier among the girl “leavers” than any other group.

There is, however, an improvement in this condition from last year.

With regard to uncleanness of the body and clothing there is also an improvement, only .59% of the total examined being found dirty, and in only .33% were pediculi present.

Although these figures obtained at the Routine Inspections are useful for comparison, they do not give a true indication of the actual uncleanness among the scholars, because in every instance the parents are warned that the inspection is going to take place. Children are specially prepared, therefore, and in bad cases even kept away in order to avoid the examination.

To overcome this difficulty and to keep certain parents up to the mark, “surprise” visits are paid to the schools by the Nurses. It was not possible to pay as many visits as we would have liked owing to shortage of staff, but it is hoped



that more work in this direction will be done during 1920. The following shows the results obtained:—

No. of visits .....	29	Children examined...	5240
Defects found.	Boys.	Girls.	Infants.
Dirty clothing and body ...	14	6	1 = 21
Pediculosis capitis ...	—	45	2 = 47
Ringworm (skin) ...	—	1	3 = 4
Impetigo ...	—	3	2 = 5
Inflammation of Eyes ...	—	—	2 = 2
			—
			79
			—

Out of these, 69 were excluded from school until the condition was remedied, and 10 were allowed to attend school but reported daily at the Clinic until fit.

Considerable improvement is manifest in the clothing and general tidiness of the children in the schools.

A great deal can be done by awakening the child's interest. An excellent proceeding at one school for many years has been the formation of a small Committee of the girls which is made responsible for supervising the cleanliness and general tidiness of the scholars in the department. The effectiveness of the arrangement is evident from the fact that a surprise inspection of the 246 girls at this school, which is attended by children from one of the poorer class districts, the following conditions only were found:—

Dirty shoes or dirty handkerchiefs .....	0
Dirty pinafores .....	0
Pins instead of proper fasteners in frocks .....	4
String instead of tape or button for pinafore...	1
Hair tied with wool or string instead of ribbon	0

**DISEASES OF THE SKIN.**—The proportion of children suffering from these affections was similar to that in the preceding year.

The amount of ringworm of skin (.33%) and scalp (.16%) shows a reduction.

There is, however, an increase in the number of cases of impetigo—1.74% of the children being affected, compared with 1.5% in 1918.

This increase is entirely due to the number of cases found among the leavers, being proportionately more than double the number found the previous year.

The treatment of many of these cases after school hours and the appointment of an extra Nurse to assist in supervising home treatment and even treating certain of the cases at the schools will no doubt materially reduce this form of minor ailment.

DENTAL DEFECTS.—See special report, pages 46 and 47.

DEFECTS OF NOSE AND THROAT.—Of the children inspected 5.82% were found to have much enlarged tonsils, and 6.41% marked adenoids.

From the Routine Inspection 294 children were referred for treatment. This does not necessarily mean for operative treatment, but where the child shows signs of deafness, of marked nasal obstruction, or other serious defect, an operation is advised.

In 72% there was no defect of the nose or throat.

DISEASES OF THE EYE.—There was a considerable diminution of the amount of conjunctivitis and blepharitis found in the schools during the year.

DEFECTIVE VISION.—The results found on examination of the children with Snellen's Test Type is shown in the special table at end of Report. The eyesight of boys and girls in the first age-group is not tested, except in exceptional circumstances.

Summarised we find:—

Total number of children whose vision was examined	...	2532	
Number of children with normal vision in both eyes	...	1036	= 41.3%
Number of children with good vision (not less than 6/9 both eyes)	... ..	980	= 38.6%
Number of children with fair vision (not less than 6/12 and without eye-strain)	...	309	= 12.2%
Number of children requiring treatment	... ..	207	= 8.1%

(For further particulars re treatment of these cases, see pages 30 and 43.)

TUBERCULOSIS.—Three cases or .07% of the children examined were suspected to be suffering from early tuberculosis of the lungs and from other forms of this disease.

This figure, of course, does not represent the percentage of tuberculous children in the Borough.

A better idea of the real amount of tuberculosis in Warrington among school children is to be gathered from the notifications received under the Public Health Tuberculosis Regulations, 1912.

The following table shows the number of school children suffering from different forms of the disease who were living in the Borough on the 31st December, 1919:—

				Attending school.		Not attending school.		Total.
				Males.	Females	Males.	Females.	
Tuberculosis of	Lungs	...	...	35	22	13	8	78
"	"	Glands	...	29	22	6	6	63
"	"	Peritoneum	...	13	9	4	3	29
"	"	Skin	...	1	4	1	—	6
"	"	Spine	...	3	—	3	2	8
"	"	Hip	...	5	—	1	4	10
"	"	Ankle	...	2	1	1	1	5
"	"	Knee	...	—	2	2	—	4
"	"	Chest Wall	...	—	1	—	—	1
"	"	Clavicle	...	1	1	—	—	2
"	"	Ribs	...	1	—	2	—	3
"	"	Elbow	...	1	1	—	—	2
"	"	Tibia	...	1	—	—	—	2
"	"	Brain	...	1	—	—	—	1
"	"	Finger	...	1	—	—	—	1
"	"	Abscesses: Leg;						
		Neck, Arm	...	1	1	1	1	3
Totals ...				95	64	34	25	218

A number of school children are at present living in contact with, or have been in contact with, cases of tuberculosis, as seen from the following list:—

Number of school children at present in contact with living cases of:—

Pulmonary Tuberculosis ... 698

Other forms of Tuberculosis ... 294

Number of school children who have been in contact with:—

Cases of Pulmonary Tuberculosis that have died during the year 1919 ... 121

Cases of other forms of Tuberculosis that have died during the year 1919 ... 17

Total ... 1130

Any doubtful case is referred to the Medical Officer of Health.



During 1919 the following cases were examined at the Health Office, where a record was kept of their weight and the physical signs entered on a special chart:—

	No. of Cases.	No. of Examinations.
Tuberculosis of Lungs ... ..	26	86
Suspected Tuberculosis of Lungs...	21	59
Tuberculosis of Glands ... ..	13	16
„ „ Ankle ... ..	1	1
„ „ Spine ... ..	1	2
„ „ Skin ... ..	2	4
„ „ Peritoneum ... ..	8	13
„ „ Knee ... ..	2	5
	—	—
	74	186

The need for a special institution for treating and educating many of these cases is fully recognised and will have to be faced in the near future.

One child of school age was treated in Sankey Sanatorium. She was still receiving treatment on December 31st, 1919.

Thirteen deaths have occurred during the year of children of school age from the undermentioned forms:—

Tuberculosis of Lungs ...	7
„ „ Peritoneum ...	2
„ „ Brain ...	3
„ „ Hip ...	1
	—
Total ...	13

MENTAL CONDITION.—As to whether the child is bright, fair or dull, the opinion of the teacher is chiefly taken, but the Medical Officer judges as to the mental condition of those who are classed as “backward” or “mentally deficient.” A certain number of these children were specially examined or kept under observation during the year in order to determine their fitness, or otherwise, to benefit by instruction in an ordinary elementary school.

There are some children attending our schools who are obviously mentally defective and will make no progress at all with the ordinary curriculum, but as yet there are no special institutions open to them. (See also page 26.)



**HEART DISEASE.**—Five cases of organic disease and five of functional disease of the heart were discovered.

**DISEASES OF NERVOUS SYSTEM.**—Three cases of Chorea (St. Vitus' Dance) were discovered. Two of these cases required immediate rest and treatment to prevent the onset of valvular heart disease which would certainly have ensued and permanently crippled the child had not attention been drawn to the defect.

**Exclusions.**—All children suffering from contagious disease who may be a danger to the other children, and all cases whose condition necessitates absence from school, are at once excluded by the A.S.M.O. at the time of his inspections. As a result, 436 children were thus excluded during 1919, as follows:—

<i>Impetigo</i>	...	...	...	...	...	...	32
<i>Eczema</i>	...	...	...	...	...	...	6
<i>Scabies</i>	...	...	...	...	...	...	17
<i>Ringworm: Skin</i>	...	...	...	...	...	...	2
<i>Ringworm: Scalp</i>	...	...	...	...	...	...	2
<i>Stye</i>	...	...	...	...	...	...	1
<i>Blepharitis</i>	...	...	...	...	...	...	20
<i>Conjunctivitis</i>	...	...	...	...	...	...	3
<i>Keratitis</i>	...	...	...	...	...	...	1
<i>Wax in Ears</i>	...	...	...	...	...	...	1
<i>Aural Discharge</i>	...	...	...	...	...	...	9
<i>Gingivitis</i>	...	...	...	...	...	...	1
<i>Pyorrhœa</i>	...	...	...	...	...	...	1
<i>T. B. Adenitis</i>	...	...	...	...	...	...	1
<i>Sore Throat</i>	...	...	...	...	...	...	4
<i>Influenza</i>	...	...	...	...	...	...	1
<i>Pediculosis (Head)</i>	...	...	...	...	...	...	323
<i>Pediculosis (Body)</i>	...	...	...	...	...	...	4
<i>Dirty Clothing</i>	...	...	...	...	...	...	6
<i>Defective Footgear</i>	...	...	...	...	...	...	1
<hr/>							
<i>Total</i>	...	...	...	...	...	...	436
<hr/>							

(In 1918 there were 416 such cases).

**Further Examination of Cases Selected at the Inspections in the Schools.**—The further examination of certain cases takes place at the Inspection Clinic on Friday afternoons and Saturday mornings. These cases consist of those children whom it is impossible to examine thoroughly during the Routine Examination.

The following table shows the result of the examination of 762 such children, compared with 301 similar cases last year :—

					Defect Present.	Defect Absent.		Doubtful.		Total.
Eye :—										
Vision	...	...	...	...	78	...	38	...	25	141
Squint	...	...	...	...	16	...	1	...	3	20
Corneal Opacity	...	...	...	...	2	...	1	...	—	3
Spectacles broken or lost	...	...	...	...	8	...	9	...	—	17
Spectacles unsuitable	...	...	...	...	7	...	2	...	1	10
Nose and Throat :—										
Enlarged Tonsils	...	...	...	...	20	...	33	...	14	67
Adenoids	...	...	...	...	48	...	104	...	92	244
Enlarged Tonsils and Adenoids	...	...	...	...	5	...	9	...	10	24
Ear :—										
Defective Hearing	...	...	...	...	5	...	2	...	5	12
Ear Disease	...	...	...	...	7	...	2	...	—	9
Defective Speech	...	...	...	...	3	...	2	...	1	6
Heart and Circulation :—										
Heart Disease: Organic	...	...	...	...	4	...	10	...	1	15
Heart Disease: Functional	...	...	...	...	7	...	5	...	4	16
Anæmia	...	...	...	...	2	...	—	...	1	3
Lungs :—										
Pulmonary Tuberculosis :										
Definite	...	...	...	...	1	...	—	...	—	1
Suspected	...	...	...	...	2	...	11	...	7	20
Chronic Bronchitis	...	...	...	...	12	...	15	...	10	37
Nervous System :—										
Epilepsy	...	...	...	...	—	...	1	...	1	2
Chorea	...	...	...	...	2	...	5	...	1	8
Other Diseases	...	...	...	...	1	...	1	...	1	3
Non-Pulmonary Tuberculosis :										
Glands	...	...	...	...	11	...	4	...	9	24
Other forms	...	...	...	...	—	...	1	...	—	1
Rickets	...	...	...	...	4	...	—	...	4	8
Deformities	...	...	...	...	10	...	2	...	—	12
Debility	...	...	...	...	2	...	—	...	1	3
Malnutrition	...	...	...	...	9	...	7	...	2	18
Mentally Defective	...	...	...	...	1	...	1	...	9	11
Inguinal Hernia	...	...	...	...	1	...	—	...	—	1
Other diseases or defects	...	...	...	...	17	...	6	...	3	26
Totals .....					285	...	272	...	205	762

EXAMINATION OF **Special Cases** SUBMITTED.—In addition to the children notified for examination the teachers bring any special case to the doctor at the time of the Routine Inspection. Further special cases may at any time be sent to the Inspection Clinic in order to obtain the doctor's advice.

The following table shows the suspected defect, together with the result of the Medical Officer's examination:—

Defect or Disease.	By Head Teachers at school.				Casuals at the Clinic.			
	Defect present.	Defect absent.	Doubtful.	Total.	Defect present.	Defect absent.	Doubtful.	Total.
Malnutrition .....	3		3	6			1	1
Uncleanliness :								
Head .....	10			10				
Body .....	2			2				
Skin :								
Ringworm (Head) .....	1			1				
Scabies .....	1			1				
Impetigo .....	20			20				
Other Diseases .....	10	1		11				
Eye :								
Defective Vision and Squint .....	145	64	11	220	69	1	1	71
External Eye Diseases .....	24	1	1	26	4			4
Ear :								
Defective Hearing .....	8	2	5	15				
Ear Disease (including obstruction) .....	45	2	3	50				
Nose and Throat :								
Enlarged Tonsils .....	14	2		16	20	1		21
Adenoids .....	35	34	6	75	21	1	2	24
Enlarged Tonsils and Adenoids ..	4	3		7	7			7
Defective Speech .....	11	1	1	13				
Heart and Circulation :								
Heart Disease: Organic .....		1		1				
Lungs :								
Pulmonary Tuberculosis :								
Definite .....	1			1				
Suspected .....	1		1	2	1			1
Other Diseases .....	1			1			2	2
Nervous System :								
Epilepsy .....			2	2				
Chorea .....	1	2		3				
Other Diseases .....	3	1		4				
Non-Pulmonary Tuberculosis :								
Glands .....								
Bones and Joints .....								
Other forms .....	1			1				
Rickets .....	2			2				
Deformities .....	5			5				
Other Defects or Diseases .....	19	6	3	28			2	2
Totals .....	367	120	36	523*	122	3	8	133

(\*In 1918 there were 384 such cases.)

For minor ailment cases referred to the Clinic see page 37.

## MEDICAL INSPECTION—SECONDARY SCHOOL.

Examination of the children in the Entrant Group was instituted for the first time at the Secondary School during 1918.

Last year 142 children (69 boys and 73 girls) were inspected, compared with 58 children the previous year. The conditions found were very satisfactory.

General nutrition was normal or above normal, except in the case of one boy and four girls, who were somewhat below normal.

In 6 cases (2 boys and 4 girls) four or more teeth were found decayed.

The vision was found to be normal in 56 boys and 54 girls.

The cases referred for treatment were:—

Enlarged Tonsils	...	...	...	...	5
Adenoids	...	...	...	...	1
Defective Vision	...	...	...	...	6
Squint	...	...	...	...	1
Enlarged Tonsils and Defective Vision	...	...	...	...	1
Glasses unsuitable	...	...	...	...	1
Defective Teeth	...	...	...	...	6
					<hr/>
Total					21
					<hr/>

No provision is made for treatment of Secondary School children at the School Clinic, but in every instance satisfactory treatment was obtained from the family doctor.

## DEFECTIVE CHILDREN IN THE AREA.

### I.—Physically Defective Children.

The work of medically supervising this class of child has been carried out on lines detailed in previous Reports.



The cases kept under observation were as follows:—

A.—NOT ATTENDING SCHOOL.

	Boys.	Girls.	Total.
Tuberculosis of—			
Lungs ... ..	13	8	21
Other organs ... ..	21	17	38
Cardiac Disease ... ..	2	4	6
Epilepsy ... ..	4	3	7
Rickets ... ..	3	7	10
Debility ... ..	2	1	3
Infantile Paralysis ... ..	2	3	5
Rheumatism ... ..	—	1	1
Incontinence: Urine ... ..	2	—	2
„ Faeces ... ..	1	—	1
Partially Blind ... ..	2	1	3
Chorea ... ..	—	—	4
			<hr/> 101 <hr/>

(In 1918 the number was 79.)

B.—ATTENDING SCHOOL.

	Boys.	Girls.	Total.
Anæmia and Debility ... ..	1	3	4
Infantile Paralysis ... ..	12	9	21
Tuberculosis of—			
Lungs ... ..	35	22	57
Other organs ... ..	60	42	102
Heart Disease ... ..	8	6	14
Defective Speech ... ..	7	3	10
Partially Blind (Corneal Ulcers, &c.)	2	1	3
Rickets ... ..	7	7	14
Epilepsy ... ..	4	3	7
Congenital Deformity (Hip Joints) ...	2	1	3
Inguinal Hernia ... ..	1	—	1
Incontinence of Urine ... ..	—	1	1
„ „ Faeces ... ..	1	—	1
Club Foot ... ..	2	—	2
Chorea ... ..	—	1	1
Bronchitis (Chronic) ... ..	—	2	2
Knee Joint (movable body in) ...	—	1	1
Otitis Media ... ..	—	1	1
Curvature of Spine ... ..	2	3	5
			<hr/> 250 <hr/>

(In 1918 the number was 205.)

## II.—Mentally Defective Children.

In the following cases the special schedule drawn up by the Board of Education has been completed, recording the mental capacity of certain of the children of school age resident in this Borough.

In every instance the intelligence of the child was assessed by the mental tests designed by Binet and Simon.

	Fit for Ordinary School.		Fit for Special School.		Not fit for any School.		Total.		
	B.	G.	B.	G.	B.	G.	B.	G.	Total
Dull .....		3						3	3
Backward .....	7	5	2	1			9	6	15
Feeble-minded ...	3	1	6	5	1		10	6	16
Imbecile .....			7	4	3	3	10	7	17
Idiot .....					3	1	3	1	4
Epileptic .....	4	3	3	3	1		8	6	14
	14	12	18	13	8	4	40	29	69

These cases are kept under observation and from time to time new cases are added to them as attention is drawn to them by parents, school teachers, or school attendance officers. This cannot be considered a complete list by any means, but it has been found quite impossible, owing to pressure of work, to carry out a systematic examination of all the dull and backward children in our schools.

Under the Mental Deficiency Act (1913) and Elementary Education (Defective and Epileptic Children) Act, 1914, special arrangements will have to be made for dealing with a certain number of these children.

A summary of the cases of exceptional children is given in the next Table.

TABLE III.—NUMERICAL RETURN OF ALL EXCEPTIONAL CHILDREN IN THE AREA IN 1919.

			Boys.	Girls.	Total.
Blind (including partially blind).		Attending Public Elementary Schools	2	1	3
		Attending Certified Schools for the Blind .....	2	7	9
		Not at School .....	2	1	3
Deaf and Dumb (including partially deaf).		Attending Public Elementary Schools	—	1	1
		Attending Certified Schools for the Deaf .....	5	5	10
		Not at School .....	—	—	—
Mentally Deficient.	Feeble-minded.	Attending Public Elementary Schools	8	1	9
		Attending Certified Schools for Mentally Defective Children .....	—	—	—
		Notified to the Local (Control) Authority during the year .....	—	—	—
		Not at School .....	2	5	7
	Imbeciles.	At School .....	—	—	—
		Not at School .....	10	7	17
	Idiots.	—————	3	1	4
Epileptics.		Attending Public Elementary Schools	4	3	7
		Attending Certified Schools for Epileptics .....	—	—	—
		Not at School .....	4	3	7
Physically Defective.	Pulmonary Tuberculosis.	Attending Public Elementary Schools	35	22	57
		Attending Certified Schools for Physically Defective Children .....	—	—	—
		Not at School .....	13	8	21
	Other forms of Tuberculosis.	Attending Public Elementary Schools	60	42	102
		Attending Certified Schools for Physically Defective Children .....	—	—	—
		Not at School .....	21	17	38
	Cripples other than Tubercular.	Attending Public Elementary Schools	31	23	54
		Attending Certified Schools for Physically Defective Children .....	—	—	—
		Not at School .....	9	16	25
Total .....			211	163	374



## OPEN-AIR FACILITIES FOR EDUCATION.

There can be no doubt as to the good results achieved from the education of tubercular and weakly children on strictly open-air principles, and if fresh air proves of such benefit to the ailing it must surely be of value to the healthy.

It is very desirable that more provision for open-air education should be provided, and it is to be hoped that this will be taken into consideration in planning all the new schools.

There is at present for elementary school children in Warrington no open-air day or residential school, neither are there any open-air classrooms in connection with the ordinary schools.

So far as possible the teachers make use of the playgrounds and sheds as much as they can in the summer time in fine weather. In addition, there are the casual visits to the parks for Nature lessons.

## PHYSICAL EDUCATION.

The 1909 Syllabus of the Board of Education is in use in all the schools, and, in accordance with this, various physical exercises are regularly carried out by all the children.

No Organiser of Physical Training and no special instructors have been appointed, but usually each teacher is responsible for his or her own class. Many of the male teachers have had special training in the Army. The *exercises* consist of drill and organised games and are undertaken for periods of 20 minutes on 3 or 4 days in the week.

Breathing exercises are carried out by all children before the singing lessons, and, in addition, all children who are mouth breathers or have had operations for the removal of tonsils and adenoids are kept under special supervision by the teachers in this direction.

*Dancing* is in some instances the form of exercise used in the girls' schools.

These exercises are carried out in the playgrounds as a rule, but occasionally in the classrooms in wet weather.

*Swimming* is taught to all boys and girls over 11 years of age, providing the parents do not object, and the physical condition of the child permits.

*Games.*—Most of the schools have their boys' football teams and there is a "rounders' league" for the girls. Baseball is played in the summer months owing to the difficulty of finding suitable cricket pitches.

There are no playing fields for the public elementary school children, but arrangements are made for occasional matches to be played on the grounds of local clubs.

PLAY CENTRES.—One experimental centre has been inaugurated by a voluntary organisation and is open twice weekly in one of the modern elementary schools. Children between the ages of 10 and 13 years chiefly patronised this Centre, and classes for playing games, singing, and dancing are arranged. Perhaps there is not the same need for play centres in a town like Warrington as there is in some places, but this step will be watched with considerable interest.

HOLIDAY CAMPS.—Although the Summer Camp which was held annually for some years in North Wales was suspended during the War, it is hoped that it will be re-opened this year. The Camp is provided by a voluntary organisation in the Town and has been of the utmost benefit to the children. Those selected were of the poorest class, and their length of stay at the seaside was one week. Each year the Camp is used for one month and the number of children sent averages 125 girls and 140 boys per week.

## **B.—THE “ FOLLOWING UP ” OF CHILDREN FOUND TO BE DEFECTIVE.**

The procedure adopted was the same as detailed in previous Reports.

A large amount of work is done annually in “ following up ” the cases to see that the defects found at Routine Inspection are promptly and satisfactorily dealt with.

The tables that follow show the results attained, but no record is given of the actual number of re-examinations made by the doctor in each case, or of the number of visits paid by nurses and by school attendance officers in advising parents and in offering facilities of treatment.

In Table II. on page 13 is shown the number of defects found at Medical Inspections (Routine and Special), and also those at the Inspection Clinic (page 35), and in Tables IV. and V. will be seen how many of the cases received treatment.

TABLE IV.—TREATMENT OF DEFECTS OF CHILDREN DURING 1919.

Condition.	No. of defects found, for which treatment was considered necessary.			No. of defects for which no report is available.	No. of defects treated.	Results of treatment.			No. of defects not treated.	Percentage of defects treated.
	From pre-vious year.	New*	Total.			Remedied.	Improved.	Unchanged.		
Clothing .....	—	40	40	—	40	40	—	—	—	100
Footgear .....	—	33	33	—	33	33	—	—	—	100
Cleanliness of head .....	12	908	920	—	916	916	—	—	4	99.5
Cleanliness of body .....	—	62	62	—	62	62	—	—	—	100
Nutrition .....	39	35	74	10	64	—	9	55	—	86.4
Nose and throat .....	252	391	643	10	482	284	198	—	151	74.9
External eye disease .....	40	897	937	—	937	867	70	—	—	100
Ear disease .....	3	251	254	—	254	156	98	—	—	100
Teeth .....	—	242	242	—	242	242	—	—	—	100
Heart and circulation .....	4	12	16	—	16	—	5	11	—	100
Lungs .....	3	24	27	—	27	—	2	25	—	100
Nervous system .....	2	7	9	—	9	—	1	8	—	100
Skin .....	89	1907	1996	—	1983	1983	—	—	13	99.3
Rickets .....	2	7	9	—	9	—	—	9	—	100
Deformities .....	4	4	8	—	8	—	1	7	—	100
Tuberculosis: (non-pulmonary) .....	2	8	10	—	10	—	6	4	—	100
Speech .....	—	—	—	—	—	—	—	—	—	—
Mental condition .....	—	—	—	—	—	—	—	—	—	—
Vision and squint .....	175	413	588	13	402	293	12	97	173	68.3
Hearing .....	4	3	7	—	7	—	2	5	—	100
Miscellaneous .....	48	949	997	—	960	958	1	1	37	96.2
Total .....	679	6193	6872	33	6461	5834	405	222	378	94.01

\* The return shows comprehensively all defects found during the year, from whatever source derived, which required treatment.

There is still some leeway to be made up in the treatment of vision and throat cases. These defects are dealt with at the Local Infirmary under a special arrangement with the Education Authority (for details of cases treated see page 42).

The next Table (V.) shows the total number of children discovered during the year suffering from defects that required attention, and what proportion of these children received the necessary treatment.



TABLE V.—INSPECTION, TREATMENT, &c., OF  
CHILDREN DURING 1919.

(1) The total number of children medically inspected (whether code group, special or ailing child) ... ..	8848
(2) The number of children in (1) suffering from defects (other than uncleanliness or defective clothing or foot-gear) who require to be kept under observation (but not referred for treatment) ... ..	299
(3) The number of children in (1) who were referred for treatment (excluding uncleanliness, defective clothing, &c.) ... ..	4590
(4) The number of children in (3) who received treatment for one or more defects (excluding uncleanliness, defective clothing, &c.) ... ..	4234 (92.2%)

It is satisfactory to note that the percentage treated, 92.2%, compared with 83% in 1918 and 75% in 1917, is the highest on record.

### Committee Cases and Prosecutions.

During 1919 it was found necessary to notify the parents of 16 children to appear before the Medical Inspection Committee, compared with 18 cases the previous year.

The defects for which treatment was required were enlarged tonsils and adenoids in 10 instances and defective vision in 6.

In no case was it necessary to prosecute, as the parents consented to seek medical advice after interviewing the Committee.

The procedure adopted in Warrington for dealing with uncleanliness and pediculosis capitis is detailed on page 41.

In this connection during 1919:—

No. of ped. cap. cases summoned before the	
School Attendance Committee ... ..	= 11
No. of prosecutions necessary ... ..	= 3
No. of convictions obtained ... ..	= 3

(In each case a fine varying from 2/6 to 10/- was inflicted.)

## Employment of School Children.

There are still large numbers of children in this town employed either whole-time or part-time out of school hours, although not quite so many as there were during the period of the War.

Investigations in the past have shown that this employment has been one of the potent causes of malnutrition, and in many cases exercises a deleterious effect on the child in other ways.

Exercising the powers under the Education Act of 1918, several cases in which the employment could be definitely shown to be injurious were brought before the Medical Inspection Committee, and in each instance the form of employment was prohibited.

The School Attendance Committee do not grant exemption to a child under 14 years of age until any defect from which the child is suffering has been treated satisfactorily.

Certain Bye-Laws regulating the employment of children of school-age within the Borough were passed by the Local Education Authority, but have yet to be confirmed by the Home Office:—

### *DRAFT BYE-LAWS.*

*Approved by the Education Committee at the Meeting held on Monday, September 15th, 1919, and recommended to the Town Council for adoption.*

### DEFINITIONS.

The expression “child” means any child up to the age when his parents cease to be under an obligation to cause him to receive efficient elementary instruction or to attend school under the enactments relating to Elementary Education and the Bye-Laws made thereunder.

The expression “employ” and “employment” used in reference to a child include employment in any labour exercised by way of trade for the purposes of gain, whether the gain be to the child or to any other person.

The expression “school” means any Public Elementary School as defined by the Education Acts.

These Bye-Laws shall apply to the whole of the County Borough of Warrington, being the area of the Council within the meaning of the Education Act, 1918.

1. A child under the age of 12 years shall not be employed.
2. A child who is liable to attend school full time shall not be employed during school term on week-days other than Saturdays, except
  - (a) for one hour between the hours of 7.0 a.m. and 8.15 a.m.;
  - (b) between the hours of 5.0 p.m. and 7.0 p.m.;
 and not for more than 2 hours on any of such days, provided that if a child is employed before 8.15 a.m. it shall not be employed for more than one hour in the afternoon.



A child who is liable to attend school full time shall not be employed on Saturdays or on any week-day when the school is not open for more than 4 hours, such employment to be between either

- (a) 7.0 a.m. and 12 noon; or
- (b) 2.0 p.m. and 7.0 p.m.

3. A child who is liable to attend school full time shall not be employed for more than 14 hours in any week in which he is required to attend school.

4. A child shall not be employed on Sundays except for the delivery of milk, and for that purpose for not more than two hours.

5. A child shall not be employed

- (a) in the occupation of hawking, peddling, or in collecting, gathering or sorting rags or refuse;
- (b) in, or in connection with, the sale of intoxicating liquor;
- (c) as a billiard or bagatelle marker or score marker or attendant in any billiard saloon or other place licensed for games or in any registered club or premises licensed for the sale of intoxicating liquors, or in the kitchen of any hotel, cook shop, eating house or refreshment room;
- (d) in selling programmes or refreshments or selling or receiving tickets or checks or in shifting scenery in any theatre, music hall, picture hall, or other registered place of amusement;
- (e) in any employment which in the opinion of the Local Education Authority or of the School Medical Officer will be prejudicial to his health or physical development or render him unfit to obtain proper benefit from his education;
- (f) if excluded from school by the School Medical Officer, the Medical Officer of Health, or a Medical Practitioner.

(NOTE.—Section 126 of the Public Health Act, 1875, provides that any person suffering from any infectious or dangerous disorder who exposes himself without taking proper precautions, or who, being in charge of any person so suffering, so exposes the sufferer, shall be liable to a penalty not exceeding £5.)

Provided that nothing in this clause shall prevent the employment of a child by a licensed grocer in delivering intoxicants contained in sealed vessels.

7. A child employed in a place of public entertainment in pursuance of a license under Section 3 of the Prevention of Cruelty to Children Act, 1904, shall not be employed in any other occupation on the same day or the day following such employment.

8. A child under 13 years of age shall not be employed in any occupation in any barber's or hairdresser's shop.

A child over 13 years of age who is liable to attend school full time shall not be employed in a barber's or hairdresser's shop for more than 5 hours on Saturday, such employment to be between the hours of 9 a.m. and 2 p.m., or 2 p.m. and 7 p.m., nor on more than 4 week-days in each week, when the employment shall be between the hours of 5.30 p.m. and 7.30 p.m.

9. Where a child is employed under these foregoing Bye-Laws (Clauses 1 to 8), it shall be the duty of the employer to keep constantly affixed in or in connection with the place in which the child is employed a notice stating the hours each day between which the child is employed.



10. A child who is exempt from attending school shall not be employed

(a) before 6.0 a.m. or after 8.0 p.m.;

(b) for more than 42 hours in any one week;

(c) for more than eight hours on any one day, exclusive of intervals for meals (which in the aggregate shall not be less than one hour).

Provided that on one week-day in each week such child shall not be employed for more than five hours nor later than 12.0 noon. The employer shall keep constantly affixed in or in connection with the place in which the child is employed a notice stating the day in the week on which employment shall cease at an hour not later than 12.0 noon.

### **C.—INSPECTION CLINIC.**

The cases at the Inspection Clinic are examined by the Assistant School Medical Officer and sorted into those who should obtain treatment from the family doctor or special institution, those who should attend the Treatment Clinic, those who are fit for school but should attend the Treatment Clinic after school hours, and those who are fit for school without any treatment.

The cases submitted for examination comprise:—

- (1) Children excluded from school at the Routine Medical Inspection suffering from contagious disease (see page 21).
- (2) Children excluded by teachers on account of possible contagious disease (including White Card cases, page 35).
- (3) Children referred by the School Attendance Officers for report as to their ability to attend school (Green Card cases, page 36).
- (4) Children for further examination of suspected defects (see page 21).
- (5) Children with defects to be re-examined as to the result of treatment or necessity for further treatment.

A summary of the numbers of children examined under the various headings gives a total of **7,287** dealt with during the year, viz. :—

(1) Cases of Contagious Disease	...	...	...	...	...	5006
(2) White Card Cases (excluded by Teachers)	...	...	...	...	...	147
(3) Green Card Cases (sent up by School Attendance Officers)	...	...	...	...	...	64
(4) Further Examinations	...	...	...	...	...	762
(5) Number of children re-examined in "following up" of defects	...	...	...	...	...	1308
Total						7287

An analysis of the cases of contagious disease dealt with in 1919 is as follows:—

	1918.	1919.
Impetigo	1429	1330
Ringworm	381	278
Eczema	62	136
Scabies	424	251
Conjunctivitis	1394	608
Blepharitis (and other eye diseases)	274	158
Aural Discharge	192	143
Pediculosis	448	556
Septic Sores, and Miscellaneous	1043	1546
	5647	5006

The following are comparative figures showing the numbers of this class of case that have attended during the past eight years:—

1912	...	...	...	...	...	1741
1913	...	...	...	...	...	2430
1914	...	...	...	...	...	2891
1915	...	...	...	...	...	3274
1916	...	...	...	...	...	3824
1917	...	...	...	...	...	4298
1918	...	...	...	...	...	5647
1919	...	...	...	...	...	5006

It will be seen that there is some reduction in the number of cases which is mainly accounted for by the smaller number of cases of conjunctivitis. There were also fewer cases of scabies.

An increase, however, is manifest in the case of Pediculosis, probably due to the greater number of surprise visits paid by the Nurses.

The number of miscellaneous cases is considerably in excess of the previous year.

Where the circumstances warranted it, cases were induced to obtain treatment from a private practitioner.

Out of the cases referred by teachers the following (**White Card cases**) were found not to be suffering from contagious disease, and in the majority of cases these, too, were referred to their own doctor:—

Abscesses, Boils, &c.	...	...	...	...	27
Adenoids and Enlarged Tonsils	...	...	...	...	1
Alimentary Ailments	...	...	...	...	8
Anæmia and Debility	...	...	...	...	7
Bronchitis	...	...	...	...	9
Chorea	...	...	...	...	3
Eye Diseases	...	...	...	...	42
Fractures	...	...	...	...	2
Headaches and Neuralgia	...	...	...	...	3
Incontinence of Urine	...	...	...	...	1
„ „ Faeces	...	...	...	...	1
Influenza	...	...	...	...	3
Nose and Throat Conditions (other than T. & A.)	...	...	...	...	7
Skin Diseases	...	...	...	...	10
Sprains and Bruises	...	...	...	...	3
Tuberculosis (Glands and Joints)	...	...	...	...	7
„ (Lungs)	...	...	...	...	3
Volvitis	...	...	...	...	1
Other Conditions (including Deafness, etc.)	...	...	...	...	9
					147

(In 1918, 188 such cases were submitted for examination.)

In addition, 191 children were certified fit for school without any treatment on the occasion of their first attendance at the School Clinic.

The cases sent for examination by the School Attendance Officers were 64 in number (**Green Card cases**).

Abscesses, Boils, &c.	...	...	...	...	2
Alimentary Ailments	...	...	...	...	4
Anæmia and Debility	...	...	...	...	4
Bronchitis and Catarrh	...	...	...	...	6
Chorea	...	...	...	...	3
Contusions	...	...	...	...	2
Epilepsy	...	...	...	...	2
Eye diseases	...	...	...	...	8
Incontinence	...	...	...	...	4
Nose and Throat Conditions	...	...	...	...	4
Rheumatism	...	...	...	...	9
Rickets	...	...	...	...	2
Skin Diseases	...	...	...	...	6
Tuberculosis (Glands, Joints, &c.)	...	...	...	...	7
„ (Lungs)	...	...	...	...	1
					64

(In 1918, 82 such cases were submitted for examination.)

The further examinations (see page 21) and re-examinations (page 29) are also carried out at the Inspection Clinic.

#### EXAMINATION OF BURSARS, STUDENT AND PUPIL TEACHERS.

15 Candidates for Bursarships, 7 for Student Teacherships and 30 Candidates for Senior and Junior Scholarships were medically examined by the School Medical Officer.



## EXAMINATION OF CHILDREN BEFORE ENTRY TO SPECIAL SCHOOLS.

1 Girl and 4 Boys before admission to Industrial Schools.

1 Boy and 2 Girls before re-admission to Deaf and Dumb Schools.

4 Boys before admission to Blind Schools.

**D.—TREATMENT.****I.—MINOR AILMENTS.***(a)* TREATMENT CLINIC.

The cases attending for treatment were as follows:—

	No. of Children.	No. of Attendances at the Treatment Clinic.
Aural Discharge ...	143	809
Ringworm: Skin ...	122	997
„ Scalp ...	145	4914
Conjunctivitis ...	602	4224
Impetigo: Skin ...	977	5665
„ Scalp ...	342	2827
Blepharitis and other Eye Diseases ...	158	894
Miscellaneous ...	719	4744
“After School” Cases	2273	7175
	<hr/> 5481	<hr/> 32249

The “After School” cases consist of children suffering from the usual minor ailments whom it was not found necessary to exclude from school either because the condition was slight or because with appropriate dressings there was no risk either to the patient or the other children in attendance.

The work done in recent years is shown by the following figures:—

	No. of Children treated.	No. of Attendances made by Children.
1913 ...	268	2036
1914 ...	1973	16391
1915 ...	3721	36531
1916 ...	3631	36919
1917 ...	3802	33378
1918 ...	5124	39991
1919 ...	5481	32249

These figures do not take into account the large number of attendances of children who were receiving home treatment (page 40) but had to report regularly at the Clinic.

The next table gives further details and shows the average duration of absence from school of cases that completed treatment during the year:—

Disease.	No. of cases treated in School Clinic	Total No. of attendances.	Cases in which treatment completed.				
			No. of cases.	No. of attendances.	Average no. of attendances per case.	No. of days under treatment.	Average no. of days for treatment.
Aural Discharge—							
1919 .....	143	809	143	809	5.6	1200	8.3
1918 .....	114	473	111	454	4.09	883	7.9
1917 .....	109	824	107	820	7.6	1317	12.3
1916 .....	166	1752	161	1525	9.4	3268	20.3
1915 .....	188	1542	186	1479	7.9	3003	16.1
1914 .....	106	952	73	452	6.1	1262	17.2
Ringworm Skin—							
1919 .....	122	997	122	997	8.1	1467	12.02
1918 .....	192	2927	184	2993	16.2	6730	36.5
1917 .....	158	2549	155	2511	15.5	4119	26.5
1916 .....	175	2249	169	2199	13.01	3949	23.3
1915 .....	144	1779	133	1685	12.6	3527	26.5
1914 .....	79	693	74	668	9.0	2391	32.3
Ringworm Scalp—							
1919 .....	145	4914	138	4814	34.8	7181	52.03
1918 .....	142	5614	119	5192	43.6	11171	93.8
1917 .....	132	5134	110	4606	41.8	7806	70.9
1916 .....	175	7582	146	6868	47.04	12469	85.4
1915 .....	162	4481	134	3161	23.5	6549	48.8
1914 .....	65	1607	37	808	21.8	4152	112.2
Conjunctivitis—							
1919 .....	602	4224	602	4224	7.01	5647	9.3
1918 .....	1315	9243	1282	9088	7.08	17754	13.8
1917 .....	372	3096	367	3050	8.3	4629	12.3
1916 .....	418	4650	409	4548	11.1	8021	19.6
1915 .....	732	10274	711	9973	11.2	17806	25.04
1914 .....	598	7036	548	6407	11.6	17153	31.3
Impetigo Skin—							
1919 .....	977	5665	974	5644	5.7	7740	7.9
1918 .....	898	4773	874	4685	5.3	8481	9.7
1917 .....	853	4076	849	4064	4.7	5811	6.8
1916 .....	798	4155	793	4129	5.2	7145	9.01
1915 .....	879	5738	866	5694	6.5	7591	8.7
1914 .....	511	2527	507	2516	4.9	6019	11.8
Impetigo Scalp—							
1919 .....	342	2827	341	2818	8.2	3205	9.4
1918 .....	412	3005	399	3939	9.6	5351	13.4
1917 .....	369	2074	365	2054	5.6	2907	7.9
1916 .....	293	1925	287	1874	6.5	4147	14.4
1915 .....	329	1883	321	1838	5.7	3199	9.9
1914 .....	237	1481	227	1431	6.3	3432	15.1
Blepharitis and other Eye Diseases—							
1919 .....	158	894	158	894	5.6	1460	9.2
1918 .....	209	1432	202	1389	6.8	2337	11.5
1917 .....	216	1483	211	1421	6.7	2573	11.9
1916 .....	347	2900	336	2785	8.2	5211	15.5
1915 .....	294	2685	287	2616	9.1	5123	17.8
Miscellaneous—							
1919 .....	719	4744	715	4719	6.6	6113	8.5
1918 .....	732	4809	718	4727	6.5	7566	10.5
1917 .....	827	5019	813	4922	6.05	7624	9.3
1916 .....	493	3342	484	3240	6.7	5264	10.9
1915 .....	376	2119	368	2065	5.6	4058	11.02
1914 .....	305	1515	71	347	4.8	828	11.6

From the preceding figures it is evident that although a larger number of children were dealt with, these children made fewer attendances at the Clinic and were under treatment in all instances (except aural discharge cases) for a shorter period than in the preceding year.

This is due largely to the following facts:—

- (1) The appointment of an extra Nurse, enabling us to open the Clinic every morning as well as afternoon. At this morning Clinic, as a rule, cases requiring special dressings such as fomentations or burn cases attend and are selected on this account by the Nurses. Further, it is possible for acute cases of conjunctivitis, &c., requiring extra treatment to attend twice daily.
- (2) The children are attending more regularly, partly owing to more parental supervision and partly owing to the increased staff being able to do more visiting in the homes and thus to follow up the absentees.
- (3) As few mothers are now employed in industrial life, the children suffering from minor ailments are receiving more attention at home in many instances.

The figures in the table on page 38 only refer to the cases treated that were excluded from school, and it will be observed that the average number of days' treatment necessary before the child was fit to return to school was the shortest on record for ringworm of the skin, conjunctivitis, blepharitis, and miscellaneous cases.

The primary object of the Treatment Clinic is to benefit the child. There is in certain cases, however, a tendency for some families to make too much use of the Clinic. The same children have to be repeatedly excluded from school for the same condition and no attempt is made by the parents to remedy the ailment. As an instance, during last year children from 21 of the worst families in this respect were excluded 166 times.

In these cases, so long as it is not detrimental to the child, the case is referred for treatment at home by the mother under constant supervision by the School Nurse. If need be, this home treatment is combined with Clinic treatment.

However efficient medical supervision may be in the schools, there does not seem to be much likelihood of a marked diminution in cases of minor ailments until the parents themselves begin to realise the need for greater efforts.



Further, it should be possible to encourage more interest among the children, especially the elder ones (*vide* uncleanness, page 17). In those cases where the children appear to be fond of attending the Clinic as an excuse for absence from school, nothing is as salutary as making them attend after school hours. During 1919 the number of cases that it was possible to treat after school hours was 2,273, compared with 1,110 the previous year, and to this in some measure is to be ascribed the shorter period taken to effect a cure.

(b) HOME TREATMENT.

Owing to the fact that fewer mothers are employed away from home and because more supervision and assistance could be rendered by the Nurses owing to the increase in staff, the average number of days' treatment required for these cases was very much reduced.

In fact, the average duration of absence from school before treatment was completed was only half what it was in the preceding years as is seen from the following table:—

HOME TREATMENT.

		Cases.	Atten. Av. Atten		Treatment. Days. Average.	
Sev. Ped. Cap. ....	1919	521	2961	5.6	4958	9.5
	1918	424	2952	6.8	7484	17.6
	1917	317	1285	4.5	2905	9.1
Scabies .....	1919	250	993	3.9	3121	12.5
	1918	387	2233	5.9	12907	33.3
	1917	373	2338	6.2	12398	33.2
Miscellaneous .....	1919	89	303	3.4	976	10.9
	1918	60	159	2.6	833	13.8
	1917	125	313	2.7	1027	8.2
Total .....	1919	860	4257	4.9	9055	10.5
	1918	871	5317	6.1	21224	24.3
	1917	815	3936	4.8	16330	20.03

## Pediculosis Capitis.

In every instance when a child is excluded for this condition special instructions are given at the Clinic and a copy of the following notice is issued to the parents or guardians:—

### COUNTY BOROUGH OF WARRINGTON. SCHOOL MEDICAL SERVICE.

Your child has been excluded from attendance at school on account of the condition of her hair. The following directions should be followed in order that the head may be cleansed quickly:—

First wash the head thoroughly with soft soap and water. Then in order to remove the nits, rub well into the hair a mixture of two tablespoonfuls of vinegar and one tablespoonful of hot water. After allowing this to soak in, comb the hair with a fine tooth comb before the mixture has had time to dry. If nits still remain, repeat this process every day. Cut out any hairs which are thickly coated with nits.

When sores also are present on the head, the hair must be cut off all round them.

Do not put any ointment on the head unless sores are present.

When your child is ordered to have the hair cut off this should always be done.

**N.B.**—Nits do not come into the hair of themselves. They are the eggs of lice, and will, in time, become lice if left alone.

If the head is not thoroughly cleansed within **seven days** from the date of the child's exclusion from school, and she is thereby not fit to attend school, further action will have to be taken.

G. W. N. JOSEPH,

School Medical Officer  
and  
Medical Officer of Health.

School Clinic,  
Sankey Street,  
Warrington.

If the child is not certified "fit" within 7 days the parents are summoned before the School Attendance Committee. This Committee warns and advises the parents and usually orders the case to be prosecuted for non-attendance at school if a further period of seven days elapses before the child is fit to be re-admitted into school. For prosecutions in this connection during 1919 see page 31.

## WORK OF THE SCHOOL NURSES.

In addition to the very large amount of work carried out by the School Nurses in treating the cases in the Clinic under the supervision of the School Medical Officer, they have performed the following duties during 1919:—

Visits to homes of children (in many cases assisting with treatment) ... ..	2720
Attendances at Routine Medical Inspection in the Schools with the A.S.M.O. ...	291
Notices sent to teachers with reference to excluded children ... ..	2687
“Surprise visits” to Schools (see page 17)	29
Administered nasal douches in cases of tonsils and adenoids after operation ...	119
Assisted in the Dental Clinic when necessary.	

But the mere formal representation by statistics of their routine work does not, by any means, do full justice to them.

Their activities are such that it is impossible to keep a record of the way in which their services are helping in the improvement of the home as well as of the scholar. This home visiting is one of the most important branches of the work, and it is hoped that an extra Nurse will be appointed shortly to enable more to be done.

A third School Nurse—Miss Mason—was appointed in April, 1919, and she, together with Nurse Brown and Nurse Teare, have performed their many and arduous duties in a very thorough manner, and I have nothing but praise for the way in which they have managed the children attending the Clinic.

## II.—TONSILS AND ADENOIDS AND DEFECTIVE VISION.

### Treatment at the Infirmary.

The work at the Infirmary was carried on under the same conditions as detailed in the Report for 1917.

The arrangement has proved satisfactory and has enabled us to cope with a large number of the children who formerly were unable to obtain treatment.

A smaller number of Throat and Nose cases were dealt with, but more cases of Defective Vision than in the previous year.

I am indebted to Dr. Binns and Dr. Fox, who carry out the Throat and the Eye work respectively, for the following summaries:—



## (a) TONSILS AND ADENOIDS.

Defect.	Satisfactory after Operation.		Unsatisfactory after Operation		Totals.		Grand Total.
	B.	G.	B.	G.	B.	G.	
Tonsils .....	36	51		1	36	52	88
Tonsils and Adenoids .....	40	52	2		42	52	94
Adenoids .....	39	23			39	23	62
	115	126	2	1	117	127	244

(In 1918, 276 cases were treated.)

## (b) DEFECTIVE VISION.

	Hypermetropic			Myopic Astig- matism.	Mixed Astig- matism.	Total
	Hyper- metropia.	Astig- matism.	Myopia.			
Vision improved ...	44	80	21	38	5	188
Vision not improved	28	1	4	—	1	34
Defective Vision not due to errors of refraction ...	42	—	—	—	—	42
Normal Vision ..	12	—	—	—	—	12
	126	81	25	38	6	276

(In 1918, 221 cases were treated.)

Squint was found in 19 cases and operations were done for those requiring it.

Cataract from birth was found in 3 cases, none of which could be improved by operation.

Corneal opacities, due to ulceration in childhood or infancy were responsible for incurable defective vision in 11 cases.

Optic atrophy after meningitis was found in one eye.

Double optic atrophy was found in one case and Special School ordered.

Progressive Myopia in 4 cases and for one of these a Special School advised.

A number of cases were re-examined.

### “ Spectacles ” Register.

In cases where spectacles have been prescribed for defective vision it is very necessary that children should wear them during school work.

Spectacle registers are in use in the schools and periodically inspected by the A.S.M.O. When a teacher finds a child is not wearing glasses regularly the case should be at once reported to the Education Department:

The following results are interesting, and are to some extent an index of the amount of supervision exercised by the teacher in this direction:—

School.	No of Children on Spectacle Register.	No. Wearing Spectacles Regularly.	Percentage.	No. of Cases in which Spectacles were Lost or Broken.	No. Requiring Re-examination or Change.
St. Ann's Mixed) .....	56	46	(82%)	—	—
Silver Street (Mixed) .....	62	56	(90.3%)	3	1
Smith Street (Girls') .....	38	18	(47.3%)	7	15
Hamilton Street (Boys') .....	25	13	(52%)	6	3
Beaumont (Girls') .....	45	31	(68.8%)	7	4
„ (Boys') .....	34	13	(38.2%)	5	2
Hamilton Street (Girls') ...	39	17	(43.5%)	5	10
Trinity (Mixed) .....	5	4	(80%)	—	1
Fairfield (Girls') .....	73	35	(47.9%)	9	14
Parochial (Boys') .....	72	72	(100%)	3	2
St. Mary's (Girls') .....	31	15	(48.3%)	6	—
„ „ (Boys') .....	34	17	(50%)	8	5
Heathside (Boys') .....	65	56	(86.1%)	2	2
„ (Girls') .....	60	42	(70%)	9	5
Wycliffe (Mixed) .....	64	39	(60.9%)	20	10
St. Barnabas' (Mixed) .....	28	25	(89.3%)	2	2
Evelyn Street (Girls') .....	46	30	(65.2%)	12	4
„ „ (Boys') .....	35	30	(85.6%)	2	7
Sacred Heart (Mixed) .....	16	9	(56%)	4	—
Latchford R.C. (Mixed) .....	23	12	(52%)	8	4
Arpley Street (Mixed) .....	52	36	(69%)	1	3
St. Benedict's (Infants') .....	5	1	(20%)	1	—

### III.—DENTAL.

The Clinic established in the Health Department in 1912 was carried on as usual during the year.

The policy adopted is to start each year inspecting and treating the 6 to 8-year-olds. As soon as this group is finished the Dental Officer passes on to the higher age periods, 8 to 9 years, 9 to 10 years, and so on, for the remainder of the year.

In this connection I give the following figures of the children dealt with:—

Age Periods.	No Inspected.		
	Boys.	Girls.	Total.
5—7 year olds	1579	1808	3387
8—10 „ „	557	485	1042
11—14 „ „	1251	1238	2489
	3387	3531	6918

In addition, the cases found at Routine Medical Inspections by the Medical Officer to require treatment are referred to the Dental Officer. In 1919 there were 242 of these cases and they all received attention during the year.

For further particulars I refer you to Mr. Hutchison's Report, and I must thank him for carrying on the work well and carefully.

#### CONCLUSION.

Dr. Paulusz ably carried on the duties of Assistant School Medical Officer for the major part of the year.

Dr. Lumb returned from military duties and resumed the work in the latter months.

To Mr. Hutchison (School Dental Officer) and the three Nurses (page 42) I have already referred.

Mr. Flood, Chief Sanitary Inspector, has given me much valuable assistance in investigating the sanitary condition of the schools.

I wish to convey my thanks to Mr. J. Moore Murray, the Director of Education, for assistance in collecting certain information.

I have much pleasure in stating that there has been that hearty co-operation between the officials of the Education Department and the Health Department during the past year that is necessary for the due carrying out of the work detailed in this Report.

Lastly, I would like to place on record my appreciation of the cordial support always accorded me by the Members of the Medical Inspection Committee and the Local Education Authority.

I am, Gentlemen,

Your obedient servant,

G. W. N. JOSEPH.



## DENTAL OFFICER'S REPORT.

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TO THE EDUCATION AUTHORITY OF THE  
COUNTY BOROUGH OF WARRINGTON.

GENTLEMEN,

I beg to submit my Report on Dental Inspection and Treatment for the year 1919. During the period 6,918 children were examined at the Schools. Of those children 1,889 were found to have sound dentition, and 5,029 were found to have defective dentition.

The number of those children on whose behalf parents desired treatment at the Clinic was 3,914, and the number whose parents did not desire treatment at the Clinic was 1,115.

The very high percentage of defects in the temporary set of teeth will not show much improvement until the present and future mothers are instructed in the elements of dietetics for infants and children.

I have, throughout the whole year, impressed upon the children the necessity for a free use of the tooth-brush and tooth-powder, both night and in the morning, and I am convinced that in a large number of families the advice has been followed.

I am glad also to be able to show a decided increase in the number of specials treated during the past year. All the cases examined and referred for treatment by the A.S.M.O. were dealt with by me at the Clinic.

A good number of the children suffered from *Pyorrhœa Alveolaris* and were successfully relieved by operation.

During the past year there were two cases of *Hæmorrhage* after operation, which were successfully treated by styptics.

The following tables give in detail the work accomplished as a result of my inspections at the schools, and the treatment at the Clinic:—

#### SUMMARY OF WORK DONE.

Year.	No. of children on the School Registers in the age periods examined.	No. of children inspected.	No. of parents present at examination.	No. of children referred for treatment.	No. for whom treatment was accepted.	No. actually presented for treatment.	No. of "specials" treated.	No. re-treated as result of periodical re-examination	Total no. of attendances made at the Clinic.	No. of half-days devoted to treatment.	No. of half-days devoted to inspection.
1919	8066	6918	442	5029 72.6%	3914	3145	1062	277	4207	342	148
1918	6962	5875	322	4681 79.7%	3648	2319	1055	293	3667	343	141

#### DETAILS OF TREATMENT.

Year.	Extractions.		Fillings.		No. of cases where local anæsthesia was used.	No. of cases where gas was used.	No. of cases involving consultation.	No. of other operations.
	Temp. Teeth.	Perm. Teeth.	Temp. Teeth.	Perm. Teeth.				
1919	6774	328	329	539	2732	—	162	317
1918	5538	168	208	400	2182	2	485	345

As regards the actual form of treatment, conservation rather than extraction has been carried out as far as practicable, and I am glad to be able to show an increase in the number of fillings compared with the previous year.

I am, Gentlemen,

Your obedient servant,

WM. HUTCHISON,

